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Col. Chas. W. Folsom

BRITISH AND COLONIAL ARMY SURGEONS

ON THE

19TH OF APRIL, 1775.

An Address

DELIVERED ON THE 19TH OF APRIL, 1899,
BEFORE THE MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.

BY

GEORGE LINCOLN GOODALE, M.D.

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Col. Charles H. Johnson,
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FELLOW-MEMBERS OF THE MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY:—

The cordial invitation to address you on this occasion came to me as a pleasant command. Assuredly, it is the duty of one who has received the high distinction of honorary fellowship in the general society to respond promptly to all demands which the local division may make.

Personally I have been inclined to regard my election to honorary membership in the Massachusetts Medical Society a few years ago as a complimentary expression of good will towards a branch of science which was formerly an important and interesting factor in medical education, but which retains at the present time only an insecure hold on the medical schools of English-speaking people. In short, I may consider myself as filling, however unworthily, the office of a connecting link between the past, when botanic gardens played a large part in the life of medical students, and the better present time, when the profession almost without exception regards the culture-tubes of bacteriological laboratories as the only places where vegetable activity can be profitably investigated. It will therefore be expected that I, partaking distinctly of the nature of a survival, should choose my subject from the past.

In looking about for a suitable topic, I freed myself wholly from the thought that I could bring anything worthy of your attention from the commonplace reminiscences of my brief medical practice in the early sixties, or from my service as a medical teacher at that time, although these belong unquestionably to ancient history.

Then I turned to a theme suggested by the time and place of our meeting here to-day. I asked myself whether it might not be both fitting and instructive for us to take a glance at that company of startled neighbors who, on the nineteenth of April, 1775, participated

in the events of a memorable day which called for the willing service of our profession. It appeared possible that we might gain a clearer notion of the character of this willing service, and of the part which the medical men of Middlesex and the sister counties played in the days which followed. On further reflection I realized that there would be a peculiar propriety in considering these matters in historic Watertown. A fortnight after the encounter at Lexington and Concord there was read to the Provincial Congress¹ assembled in this town, a letter by its President, Dr. Joseph Warren, to the Continental Congress which was to meet in Philadelphia on the tenth of May. This letter carried the resolutions which provided for a war loan. It was accompanied by a second enclosure, an indignant protest and pathetic appeal to the Inhabitants of Great Britain, who were addressed as "Friends and Fellow-subjects." It was also accompanied by a copy of a letter to the Colonial Agent in London, Benjamin Franklin, and the depositions relative to the sequence of events on the eighteenth and the nineteenth of April. These events are thus seen to be so closely connected with the town in which we have met, that a retrospective glance at some of them cannot be a waste of time. But the limits of the hour demand that our glance should be restricted to a narrow portion of the field. We may therefore confine our attention to the single phase which will interest us as medical men.

I invite you to consider the professional training and practice of the Colonial and British Army Surgeons in the early days of the American Revolution.

Since I am unpractised in the methods of modern historical research, and have had at my disposal only fragments of a scanty leisure to glean where the harvests have long since been gathered, the facts which I am to present will be thought to be very few, and may be regarded as unskilfully grouped. But the story of the anxious days in Middlesex and Essex, Suffolk and Norfolk, can never lose all its interest for the dwellers here.

¹ Journal of Congress containing the proceedings from Sept. 5, 1774, to Jan. 1, 1776, Vol. I. p. 81. Dr. Warren's letter bears date May 3, 1775. The enclosures are (1) depositions dated April 23 and April 25. (2) Letter to Franklin, dated April 26. (3) To the inhabitants of Great Britain, dated April 26.

The amount of material at the service of any serious student of the history of that period is copious and easily procurable. From traditions, from the archives in our State House, from the innumerable historical surveys more or less critical, from scattered biographical sketches, from the records of local and commemorative societies, and from collections illustrating civil and military life, one can obtain an embarrassing wealth of material. And I can assure any one who will undertake the task, that he will find, as I thankfully found, willing hands to assist him at every obscure point, even in desultory investigation.

Moreover, it will be found that certain phases of the special subject at which we are to look to-day have been touched in a most interesting manner by many competent students of our colonial history; among these I would commend to your reading, as supplementing my imperfect sketch, the papers by Drs. Holmes¹, Samuel A. Green², Charles M. Green³, Marcy⁴, and Loring⁵.

Our present task does not take into account any of the historical points which have been in serious dispute. It is sufficient for us to know that from the advance of the British on the eighteenth of April, to the final retreat under the shelter of the guns of the ships in the harbor, about 122 men were killed, and rather more than 200 were wounded. The large number of fatalities on both sides, and the great importance of the encounter as giving the keynote to the determined resistance, entitle it to be called a battle instead of a skirmish.

In the battle two hundred and eight were said to have been wounded. Concerning these wounded we have two questions to ask :

¹ "The Medical Profession in Massachusetts," by Oliver Wendell Holmes. Being one of a series of lectures delivered before the Lowell Institute, 1869.

² "History of Medicine in Massachusetts." A centennial address before the Mass. Med. Society, at Cambridge, June 7, 1881.

³ "The Early Physicians of Medford." By Charles M. Green, A.B., M.D.

⁴ "Hist. Middlesex Co., Mass." Vol. I, p. 158.

⁵ "The Medical Profession in Massachusetts during the Revolutionary war." *Bost. Med. and Surg. Journal*. Vol. 92, No. 24 (1875).

Trustworthy information regarding the history of medicine in the Colonies and the States will be found in Wicker's *History of Medicine in New Jersey*; Lodge's *English Colonies*, pp. 54, 236, 237, 317, 420; and also in Thacher's *American Medical Biography*. 2 Vols. Boston. 1828.

First, what care could they receive? Second, what care did they receive? The first of these questions concerns itself with the character of the medical education of that period; the second question deals with the preparedness of both sides for the sudden emergency.¹

Let us carefully note the time. One of the most active surgeons on duty on April 19, 1775, was in his fiftieth year. After graduating from Harvard College in 1744, he entered at once on his medical studies. Therefore our first glance ought to reach back at least to the middle of the last century, and we ought to examine the character of medical and surgical education of that date.

Giles Firman² is said to have given a course of lectures on Anatomy in New England as early as 1647. There is no authentic record of public systematic medical instruction on this continent between that date and 1754, when Dr. Hunter lectured in Newport. It must be remembered that Newport a hundred and fifty years ago possessed greater commercial importance than New York, and therefore might naturally have attracted the English surgeon. About the same time, or possibly a little earlier, Dr. Cadwallader gave clinical instruction in the hospital in Philadelphia, and, very shortly after this, Drs. Shippen and Morgān began their efficient work as teachers of medicine in the same city. Before very long they had drawn to their assistance co-laborers of a very high order of merit, chief among whom must be mentioned the name of Dr. Benjamin Rush. New York was not far behind in systematic teaching, but our other cities depended on valuable private instruction. In Massachusetts, for

¹ "Of the provincials 49 were killed, 36 wounded, and 5 missing." "Of the British 73 were killed, 172 wounded, and 26 missing." L. Shattuck. *History of Concord*. 1835. p. 116.

² "There is also another reason which moves my thoughts and desires this way, namely that our young Students in Physick may be trained up better than yet they bee, who have only theoreticall knowledge, and are forced to fall to practice before ever they saw an Anatomy made, or duely trained up in making experiments, for we never had but one Anatomy in the Countrey, which Mr. *Giles Firman* (now in England) did make and read very well."—The *Cleare Sunshine of the Gospell*, breaking forth upon the Indians in New England. John Eliot. Roxbury. 24 Sept. 1647 (reprinted in *Mass. Hist. Coll.* 3d series, Vol. IV, p. 57).

instance, the school founded by Dr. John Warren did not fairly begin its career until 1780, although its corps of lecturers had been masters in teaching and practice for many years before.

The systematic instruction which was available in 1770 was excellent, and was supplemented accidentally in a singular way. Many well-trained British army surgeons had been in service on this continent during the French war, and these remaining to practise in our larger places, unquestionably did much to raise the tone of the medical profession.

The medical men in America at the period to which our glance is restricted were, therefore, of the following classes: (1) the few who had pursued their medical studies in Great Britain or on the continent of Europe; (2) those who had made use of the early colonial schools; (3) the larger number who had studied under colonial physicians as pupils or apprentices; and (4) the very few surviving medical clergy.

Considered from the point of view of the physician and surgeon, the closing half of the last century possesses a high degree of interest. It is marked by two important reforms. One of these was the substitution of English for Latin in Dr. Cullen's lectures on the Practice of Physic. When we recollect that the mania for systematizing had gone so far as to carry the genera and species for distinguishable diseases to absurdly refined distinctions unwarranted by the facts, the replacement of the vernacular, in which the uselessness of such hair-splitting discriminations became obvious, for a dead language in which they might masquerade with dignity, was in itself a marked advance. The second reform came from the hands of John Hunter, aided by his brother William. To these men is largely due the introduction of a true scientific method. From that time forward nature was accepted as a leader by the more prominent medical and surgical teachers. Before that time there had been some who, wiser than their generation, had humbly taken nature as a guide; but they did not compel, as John Hunter did, wide acquiescence in this policy. But, as every reader of medical history knows, there have remained some who, even now, refuse her gentle and safe leadership.

Of John Hunter, Abernethy said, in his Hunterian memorial oration, "The whole history of medicine affords no instance of "its promotion by an individual at all comparable with that produced by the man whose natal day we have met to commemorate." And later he said, "Briefly to express his peculiar merit, "I may call him the greatest physionosologist (or expositor of "disease)."

The list of efficient teachers in Great Britain and on the continent at that period was very long. The English and Scotch schools, especially, had no lack of inspiring men.

Under the stimulating guidance of eminent teachers, all the colonial and British army surgeons were either directly or indirectly trained. From such teachers inspiration was derived at first hand by the pupils who had the advantages of the European schools, and these pupils brought to their homes in the colonies the enthusiasm which had come from personal intimacy with their instructors; and this enthusiasm kindled in its turn their own pupils and apprentices. These latter, the pupils and apprentices here, had an added quality which tended to ensure success,—namely, the marvellous adaptability possessed by Anglo-Saxon colonists, and also the still more wonderful power of bending means instantly and unfailingly to ends. As a result of this inherited power, Anglo-Saxon colonists strike out new paths and suggest new methods which are not unfrequently such as to find favor in the mother nation. You can easily call to mind a large number of creditable contributions made in Australia, Canada, and in our own States, welcomed in the old world as important accessions to medical and surgical knowledge.

We ask next, if such was the sound training of the medical men of the period with which we are now dealing, what were the methods used, and what were the appliances at their command?

First, as to means of accurate diagnosis they were almost completely unarmed. Their acuteness in reading appearances, however, made up largely for the lack of what to-day are regarded as absolutely essential. The discernment of many of those practitioners was nothing short of incredible.

Dr. Thacher, writing in 1828, fifty years and more after the period with which we are now engaged, says: "The practitioner of the present day with all the light of the last half century about him can hardly understand how much his predecessors suffered for want of books, instruments, and all the facilities which are at the command of the modern physician and surgeon: but their sagacity, careful watchings, perseverance, and tact often more than supplied the place of books and systems. Nature is generally communicative and kind to those devoted to her laws and suggestions, and not unfrequently her simple inspirations are more efficacious than abstruse theories however ingenious. Disease has often yielded to the anxious watcher and careful nurse when science, proud of her knowledge, might have prescribed in vain."

You will remember how very recent are the appliances which you make use of in your daily task of securing an accurate diagnosis. The achromatic microscope was the gift of the first part of the present century; refined and positive methods of chemical analysis date from the second quarter of this century; the clinical thermometer came into general use only in the third quarter of this century, and so on. Dr. Weir Mitchell has made clear to us how lacking in instruments of precision the profession was until very lately, and he has shown in his charming manner that many of the instruments on which we pride ourselves existed in recognizable foreshadowings long ago.

Second, what were the instrumental appliances of the surgeon at that date? Making all allowances for a much higher degree of mechanical perfection in the instruments employed in operations now, it can be said that the range at that time was wide and the quality was fairly good. Inspection of any of the surgeons' chests now treasured in collections shows that the instrumental appliances for surgical operations were on the whole satisfactory.

Moreover, the instruments were handled with remarkable dexterity. The operators had no anesthetics, and therefore to the patient every minute of the operation counted as a year of torture: celerity meant relief from pain.

The widest difference between that time and ours is the insistence now on absolute cleanliness from start to finish in every surgical procedure. At the time of the revolution that most rough and ready aseptic method, the use of the actual cautery in the searing of wounds, was becoming obsolete. You may remember the allusion which Richard Blackmore makes to this practice in his story, of a little later date, "The Maid of Sker." "Parson Jack arose and said, "as he staggered, 'I am bitten in two places if not more.' He rather gasped than said to us as he laid bare his enormous arms, 'I care not much, I will follow my friend. Or if the Lord should please to spare me, henceforth I am an altered man. And yet for the sake of my family, will you heat the kitchen poker?'" Antiseptics were known and employed, but what we call asepsis was unthought of. Surgeons conducted operations with a disregard of precautions which would be now regarded as distinctly criminal, and which would bring instant, complete, and merited disgrace on the operator. When one thinks of those surgical cases, and is perhaps inclined to wonder that such a large proportion of the patients recovered, it must be remembered that the surgical practice of that period was based largely on Hunter's precepts, and was a distinct advance over all that had gone before.

While you have been listening to this account, your minds have asked the question which early came to me in this examination of the war of the revolution: what sorts of wounds were made in those days by the large round bullet? Certainly the musket ball did not come with the swift mercy of the small pointed bullet of our times.

The whole subject of the peculiar wounds and their treatment in 1775 is brought vividly before us in a work which I have been permitted to study in the Boston Public Library. The book is entitled: *Plain, concise, and practical remarks on the treatment of wounds and fractures, to which is added a short appendix on camp and military hospitals, principally designed for the use of young military surgeons in North America.* By John Jones, M.D., Professor of Surgery in King's College, New York. The dedication to Dr. Thomas Cadwallader bears date 12th Oct., 1775.

This copy of the work possesses considerable interest from the fact that it was presented by Dr. John Brooks, one of the revolutionary surgeons, afterwards Governor of Massachusetts, to the Massachusetts Medical Society, and by the Society entrusted to the Public Library.

In the preface Professor Jones calls attention to the danger of the separation of the science of surgery from the art of operating, and speaks of the fatal consequences of the total separation of physic and surgery. He divides surgery into medical and manual. In the preface he alludes to certain teachers of surgery whose works can be safely followed; namely, Bromfield, Gooch, LeDran, Sharp, and White, but places at the head of the profession Dr. Pott. The failure to refer to Hunter will be understood by those who have read accounts of the acrimonious controversies relative to priority, — a subject which we have not time to deal with.

We can better use the time by quoting from the end of his preface: "As to those young gentlemen, who will neither read nor reason, but practice at a venture, and sport with the lives and limbs of their fellow-creatures, I can only, with Dr. Huxham, advise them seriously to peruse the sixth commandment."

Let me read the headings of his chapters to show the scope of his treatise: "Wounds in general." "Inflammation." "The Division of wounds." "Penetrating wounds." "Simple fractures of the limbs." "Compound fractures." "Amputations." "Blows on the head." "Injuries arising from concussion or commotion." "Injuries arising from fractures of the skull." "Gunshot wounds."

The practice which he advises was fully abreast of the times. In some particulars he combined the best of two conflicting modes of practice. He always advocates the use of simple means wherever practicable.

The general impression made on the mind by studying this work is, that we are dealing with a well-trained and sensible all-round surgeon. Some of his views relative to hospitals and hygiene may be glanced at later in the present hour. But we are now to examine the remedial agents other than instrumental which the colonial and British army surgeons of that period were instructed to use.

Our examination of the remedial agents most used by the colonial physicians can be facilitated by employing the classification of remedies which many of you associate with the distinguished teacher of *Materia Medica*, the late Edward H. Clarke. You will perhaps remember that he recognized four groups: namely, first, *Subjecta*, mental influences; second, *Alimenta*, foods; third, *Circumfusa*, surroundings; and, lastly, certain *Medicamenta*, or drugs, properly so-called. Taking these in Dr. Clarke's order, it must be noted first, that from the earliest times down to this very day, *subjecta*, mental influences, have occupied an important place. Without going into detail, it may be remarked that in the last half of the last century medical men were not averse to impressing the minds of their patients in a way which was perfectly legitimate considering the times, but which would not now be tolerated for a moment except by charlatans. A single illustration may be cited; namely, viper-broth, of which Dr. James, approvingly quoted by Dr. John Theobald, in 1766, says (after describing the mode of making a strong broth from a viper and a chicken): "Broths taken frequently and in small quantity at a time are excellent restoratives and of infinite service in decays; on this account viper-broth may be reckoned a restorative though I esteem the chicken the principal ingredient to be depended on, for I am convinced by experience that vipers have no one virtue to recommend them that can be depended on; but it is usual to overlook the efficiency of things we are daily conversant with, and ascribe their effects (to matters) that are not so common, though less to be depended upon; and I am certain that whosoever tries chicken broth without and with the viper, will find as much service from the first as from the latter." But under the tenacious superstitions of that time, the mental impression produced by the knowledge that the restorative contained the virtues of a viper that could not die until the sun went down must have exerted a profound sustaining influence. If one looks over the almost numberless authorized and unauthorized dispensatories and pharmacopœias of that period, it will be observed that many remedial agents are mostly signatural and of a type calculated to work chiefly on the imagination.

Our revolutionary surgeons had often to deal with mental maladies. Thus in the Military Journals of Dr. Thacher, who was a surgeon's mate at the outbreak of the revolution and who served practically as surgeon through the whole war, we read as follows: "Our troops in camp are in general healthy, but we are troubled with many perplexing instances of indisposition occasioned by absence from home, called by Dr. Cullen Nostalgia or home-sickness. This complaint is frequent among the militia and recruits from New England. They become dull and melancholy, with loss of appetite, restless nights, and great weakness. In some instances, they become so hypochondriacal as to be proper subjects for the hospital. This disease is in many instances cured by the raillery of the old soldiers, but is generally suspended by a constant or active engagement of the mind, as by drill exercises, camp discipline, and by uncommon anxiety caused by the prospect of a battle."

Second, Alimenta. Of course our allusion to viper-broth might properly come under this head, but I have placed it where it would better fall, and I reserve this section on foods for a brief reference to the army rations of that date.

In the Provincial Congress at Watertown, June 10th, 1775, it was "Resolved, that each soldier in the Massachusetts Army shall have the following allowance per day, viz.,—Art. 1. One pound of bread. Art. 2. Half a pound of beef, and half a pound of pork, and if pork cannot be had, one pound and a quarter of beef, and one day in the seven they shall have one pound and a quarter of salt fish instead of one day's allowance of meat. Art. 3. One pint of milk and if milk cannot be had one gill of rice. 4th. One quart of good spruce or malt beer. 5th. One gill of peas or beans or other sauce equivalent. 6th. Six ounces of good butter per week. 7th. One pound of good common soap per six men per week. 8th. Half a pint of vinegar per week, per man, if it can be had."

Through the kindness of Dr. Edwin H. Brigham of the Medical Library, Boston, I have been permitted to examine some of the original requisitions for supplies at that time, and the data convince me that the amount of rations ordered was generous and judicious. It is

interesting to compare the colonial figures with those of the armies of the old world. The amounts, calculated in calories, were about the same, although in general in favor of our men.

May I ask you to keep this fact in mind, until a little later, when we shall see the utter failure of the colonies to provide these supplies? But at the early period of the revolution with which we are just now specially engaged, the rations were abundant and good.

Circumfusa. Surroundings and changes in surroundings modify diseased action in innumerable ways. This matter early attracted the attention of the surgeons on both sides, and later in the war there are references to the effects produced by unfavorable surroundings, by wretched housing and worse clothing, and to the lack of all home comforts which sick and wounded people crave. Few records are more pathetic than the accounts of the surgeons who were sick at heart, and yet for the sake of their brave soldiers kept a smiling face. Appeals for warmer clothing had to be disregarded, because such clothing could not be had; but the well gave of theirs to the sick.

The most impartial scientific account which we have of the climatic and other similar conditions at that time is found in the letters of Dr. Johann David Schoepff, surgeon of the Anspach-Bayreuth troops employed by the British for service in America. Dr. James R. Chadwick, to whom the physicians of this neighborhood are under obligations for efficient zeal in connection with the Medical Library at Boston, found a copy of Schoepff's letters in an antiquarian bookstore in Munich, and translated it with annotations. Schoepff calls attention to the suddenness of the changes of temperature, to the extraordinary extremes, and to the other trying conditions with which we are all familiar. He goes even so far as to assert that Thomson, who wrote the famous poem on the seasons, would be puzzled in America to know exactly what season to celebrate. The account which Schoepff gives of the diseases incident to our capricious climate, and the very interesting report as to the condition of the soldiers, need not be now particularized, but these can be commended to you as absorbingly interesting. These accounts are referred to now in order to indicate that the relations of surroundings to the welfare of the sick

and well received scientific study in the period with which we are at present engaged.

Medicamenta. Some of you will remember the shortness of the list of drugs advised by Professor Clarke as essential. They were the following: Cinchona, Opium, Mercury, Iron, Arsenic, Iodine, Aloes or something in its place, Ipecacuanha or some equivalent, Ergot, and an anæsthetic. In view of the vast number of drugs which occupy a place more or less prominent in the Dispensatory this seems a short list. Of course to-day, with the new synthetic remedies, the list would be modified in some particulars by every physician, but a list given by some of you would be hardly longer than that cited from Clarke's lectures. Vast as is the number of available drugs to-day, it is to be noted that the number at the close of the last century was just about as formidable. Of course druggists did not then have all the resources of chemistry and pharmacy on which to draw for the preparation of some fresh combination every other day. Practitioners could not have foreseen that in a hundred years from their time, the entire vocabularies of the dead languages would hardly suffice to supply names for synthetic, proprietary medicinal preparations. Nevertheless they had remedies innumerable. You can hardly believe that there were then some practitioners who were so sagacious as to cut the awful list of drugs down to the few things which I shall now proceed to enumerate. I shall give the list which Dr. Charles Jarvis regarded as sufficient for his successful practice: Opium, Antimony, Mercury, Cantharides, Cinchona, and the lancet. Unquestionably there were many other physicians who were just as discriminating.

Professor Jones, in his advice to young army surgeons, alludes to only a very few drugs. He speaks indeed of only a very few remedies, but these he extols highly. "To relieve the rack of pain," I quote his words, "recourse must be had to the sovereign and almost "divine power of Opium, next to which, "bark" may be added, as a "medicine which, Mr. Ranby says, no human eloquence can talk with "panegyric proportionable to its virtues." Elixir vitriol, fetid anodynes, and laxatives, complete his list.

If you look over the priceless collection in the Essex Institute, known as the Holyoke papers, you will come to the conclusion that the colonial physicians and surgeons whom Dr. Holyoke consulted were men of no ordinary skill. You would certainly say that the letters asking advice are explicit, that the symptoms and, so far as they were understood, the physical signs were well described, and that the answers as to treatment are full of wisdom. In some instances, it is advised that the physician trust to regimen, to good air, wholesome food, and good nursing, rather than to drugs; although these latter when given are selected with sound judgment.

In short, everything goes to show that at Lexington, Concord, and on the long miles from the North Bridge to the widening Charles, the wounded not only *could* receive, but *did* receive care which was of a very high order in every way. The surgeons were well equipped to give relief.

Sir George Trevelyan, in his late work on the American Revolution, says that "Gage was expressly told that his young surgeons 'might come out and dress the wounded, but there was no need of it, for they were admirably doctored.'" He cites the following instance: "A soldier's wife wrote home on the second of May, 'My husband was wounded and taken prisoner, but they have used him well, and I am striving to get to him as he is very dangerous. My husband is now living in one of their hospitals, at a place called Cambridge. I hear 'my husband's leg is broke, and my heart is broke.'"

A notable case may be mentioned of which Middlesex tradition has preserved some details. Some of these details are inscribed on a tablet in Arlington. I am permitted to supplement the account by a few citations from a family record.

"Samuel Whittemore was a substantial citizen, active in town affairs, a selectman of Cambridge seventeen years, and held other important trusts in the province As Lord Percy's brigade passed the old gentleman's premises about noon of the 19th of April, 1775, to relieve Pitcairn and Smith who had marched the night before, the old veteran of the French war, twelve or fifteen years before, became aroused. He seized his old King's arm, and

"pistols, and no persuasion of his wife that he was too old would avail. He said he wanted to see what was going on up town." . . . The tablet on Mystic Street, Arlington, bears this legend: "Near this spot, Samuel Whittemore, then 80 years of age, killed and wounded three British soldiers, April 19th, 1775. He was shot, bayoneted, and left for dead, but recovered and lived to be 98 years of age." He is said to have been carried into Cooper's Tavern, where Dr. Tufts dressed his wounds, but told the family it was useless; a man so old and mutilated could not live. That he did rally is well known. He recovered fair health, and lived until February 2d, 1793.

May I give you an account of a case related by Dr. Thacher as occurring at a little later date (p. 225)? "One of our volunteers, named Hunt, received a dangerous wound through his shoulder and lungs; the air escaped from the wound at every breath. Dr. Eustis came to the lines and dilated the wound in the breast, and as the patient was athletic and had not sustained a very copious loss of blood, he recommended repeated and liberal blood-letting, observing that in order to cure a wound through the lungs, you must bleed the patient to death. He eventually recovered, which must be ascribed principally to the free use of the lancet and such abstemious living as to reduce him to the greatest extremity."

Such accounts of the times belong, of course, chiefly to the category of medical curiosities, but they have an abiding interest for everybody.

Some of the surgeons came from their daily rounds to this sudden emergency work. For instance, "On the 19th of April, 1775, the day of the battle of Lexington," I am quoting words from a writer who was one of the medical men at that time, "an express arrived in Boston communicating the intelligence; on which occasion the General (Dr. Joseph Warren) mounted his horse, called Mr. Eustis (who was a medical pupil at the time) and directed him to take care of his patients in his absence, and departed for the scene of action."

Now let us follow the pupil, and see what he did after he made the morning calls on the patients of his preceptor. I resume my

citation from Dr. Thacher's notice: "About one o'clock on the same day Dr. Eustis rode to Lexington and Concord, where he had an opportunity of dressing the wounds received by some of our militia from the fire of the British." In a few days more young Eustis became "Surgeon of the Regiment of Artillery" formed at Cambridge.

Others officially connected with the military organizations which had been slowly preparing for this crisis, came at once to the battle.

In Mr. Ingersoll's History of the War Department of the United States, attention is called to "the singular fact that in the resolutions of the Continental Congress first organising a Continental army there was no provision for a medical staff." The fact is, the provincial governments had arranged all that in a quiet way. "Later this omission was remedied. . . . The provisions were complex however; the officials of the corps too numerous."

There is hardly anything more surprising in the history of the American Revolution than the apparent suddenness with which an army sprang into being. But if we read the carefully prepared instructions of the sagacious Committee of Safety; if we see the directions to towns to have frequent disciplinary drills as well as the noisy, rollicking, and infrequent musters, we feel that we are watching the slow, patient growth of a great organism. It is sometimes impossible to praise sufficiently the extraordinary utilization by the Committee of Safety of every advantage in their power. Old soldiers who had brought back little but bad habits from the French and Indian wars were turned to account to steady the new recruits, just as Ortheris, and Learoyd, and the staggering Mulvaney's to-day give firmness to the raw recruits in every national service. The pounds of powder, the sheets of lead, the barrels of flour and pork, and the chests of medical supplies were kept in sight by some one in touch with the Committee of Safety, just as Germany to-day knows where all of its railroad carriages are. So that among the hundred things remembered, medical aid was not lost sight of. In fact, a good degree of prominence must have been given to this, because some of

the most influential of the early patriots were themselves medical men. And when the heavy shock of arms came, the colonial minute men and the militia were ready to stand the brunt.

Hospitals were immediately improvised. Of course, as in every engagement, most of the wounded were treated where they fell, and then were carried to neighboring houses as occasion offered. Just as soon as it was practicable, convenient houses were selected as temporary hospitals, and there are authentic records of this use at Cambridge and the adjoining towns. But at first these temporary hospitals were not brought under any regular organization. In a short time they were co-ordinated more or less successfully, and the work of attending to the wounded was divided up.

There appeared at first comparatively little likelihood that one could obtain exact information relative to the condition of these earliest hospitals, but, to my surprise, this has proved to be possible. There is brought before us a vivid picture, in writings which carry great weight; namely, the letters of Washington. He says, under date July 21, 1775, when writing to Congress, "I have made inquiry into the establishment of the Hospital, and find it in a very unsettled condition. There is no principal director or any subordination among the surgeons; of consequence disputes and contentions have arisen and must continue until it is reduced to some system. I could wish it was immediately taken into consideration, as the lives and health of both officers and men so much depend upon a due regulation of this department."

Later letters indicate that there was considerable improvement, but even to the end of the war there were serious difficulties with which the commander had to contend in adjusting relations between the various officers in the medical department, and not seldom between the surgeons and the other officers in charge of the soldiers.

It must be remembered by us when we read the accounts of these unfortunate controversies that there soon was a terrible scarcity of all supplies, and each department jealously guarded what were supposed to be its own interests.

Candidates for service in the new medical organization both for field and hospital were carefully examined, and a little later still the attention of the Continental Congress, as we have already noticed, was given to the matter. The examinations were not easy. The records show that a good proportion of the candidates were rejected, and that those who passed looked with some awe at what they had gone through. Dr. Thacher gives an account of his own examination, and then tells a story of one of the candidates who had been thrown by the severity of the examination into a profuse perspiration. Soon one of the questions touched the treatment of rheumatism. A sweating was recommended by the candidate. "And how would you certainly secure this?" "By having the patient take this examination, sir."

Let us look more closely at the hospital service. From the Appendix to the work of Professor Jones of King's College, New York, already cited, we can get a clear notion of the high ideals entertained even at the outset in regard to hospitals. Thus, on page 83: "From all which facts, it evidently appears how essentially necessary pure fresh air is to the cure of disease in general and particularly those which arise from putrescent causes, either internal or external." Again, "In short, the physician and architect have generally two opposite and incompatible views: the latter laying his plan so as to contain the greatest number of patients in the least possible space, whereas the former always aims at having the utmost room which is consistent with use and convenience." The limited accounts of the construction of the military hospitals which have come down to us show that the advice of Jones and Rush and other judicious authorities were faithfully carried out wherever this was possible.

Some of the early suggestions as to clothing make the war very real to us, even after one hundred and twenty-five years. For instance (p. 85), "To obviate the effects of temporary heat during the summer season, the clothing of troops should be lighter than what is usually worn by British soldiers. A tanned rifle shirt, over

“a short linen coat or waistcoat with sleeves, would be a much cooler
 “and a more healthy dress to march in during the heat of summer
 “than a thick woollen coat, which, by its weight, and warmth pro-
 “moting excessive sweat, must necessarily exhaust the soldier’s
 “strength. The linen dress, too, is cheaper and bears washing, no
 “trifling considerations in the clothing of an army.”

“Drills should be in the cool of the morning.”

Again, “The preservatives against cold consist in clothes, bedding,
 “and fire. Winter clothing is one of the most expensive articles in a
 “cold country, for which reason too much attention can hardly be
 “paid to the subject. . . . It is well known from experience,
 “particularly in many parts of New England, that a flannel waist-
 “coat or short vest worn next the skin will keep a man much warmer
 “than nearly double the quantity of covering over a linen shirt, and
 “secondly, a very great saving might be made in this part of a
 “soldier’s dress. The watch coats for Centinel duty may be made of
 “coarse furs which in dry frosty weather are preferable to cloth, and
 “Indian shoes or Moccasins under the same circumstances are much
 “warmer than common leather ones, which, however, ought to be
 “provided with firm thick soles to keep the feet dry when the ground
 “is wet. Each, however, ought to be provided.”

Bedding. “By this is understood a blanket to every tent of in-
 “fantry, but in this climate if a blanket be allowed to every soldier,
 “particularly at the beginning and the end of a campaign, the advan-
 “tages accruing to the service by preserving the health of the men
 “would infinitely more than counterbalance the expense.”

He says, “Lastly, as to diversions, since nothing of that sort can
 “be in force by orders, the men must be encouraged to them by the
 “example of their officers or by simple premiums to those who shall
 “excel in any kind of sports which shall be judged most proper for
 “answering this purpose. But herein some caution is necessary with
 “regard to excess, because our common people observe no medium
 “between their life of ease and pursuing the most violent exercises,
 “and however necessary motion may be to troops in fixed camps, we

"are to beware of giving them too much fatigue especially in hot weather, and in times of sickness, and above all in exposing them in wet clothes, which as it has been already observed, are the most common causes of camp diseases." (p. 92.)

Let us remember that these statements were published in 1775.

In 1778 Benjamin Rush published his classical paper for circulation among officers and men, entitled "Directions for preserving the health of soldiers." Some of you recall with pleasure the fact that this short treatise was in your hands in its republished form during our civil war, and you can bear willing testimony to its sound advice. You will remember the impressiveness with which Dr. Rush insists upon proper clothing, proper diet, cleanliness of persons and camps, proper selection of sites for camps, and exercise.

To me there is something awfully pathetic in the suggestions as to clothing and food for the troops of the Provincial and Continental armies, suggestions as to *choice* when there was no clothing at all to be had; when shoes were wanting, when starvation confronted all, and medical stores were not to be thought of as procurable. The despairing cries of the surgeons at this date are appalling. Let me read an extract from a letter from one of the most prominent surgeons to the Director-General of the United States in 1776.

"The distressed condition of the sick here is not to be described. They are without clothing, without bedding, or a shelter sufficient to screen them from the weather." And this from Trumbull: "Our people fall sick by dozens, and not a pennyworth of medicine have we for them, even in the most virulent disorders. The moment you have any supply, share it for God's sake with us. We need it almost more than you."

In my desultory excursions through this field of study I have found a great deal with reference to the management of two communicable diseases, which affected and afflicted the camps; namely, small pox and yellow fever. Although the means employed for disinfection then were wholly empirical and very unsatisfactory, there was generally a good deal of composure and there was little or no panic in confronting these pests. Their methods, now largely obsolete, by their practical

results remind one of the sensible methods of a totally different character, in vogue to-day in the ports of England. There was little to suggest the panic-stricken systems with which a part of our continent is too familiar.

Passing now from measures to men.

We turn, therefore, for a very few minutes from these somewhat general considerations to a more special examination of some of the men themselves. Among the surgeons in eastern Massachusetts at the outbreak of the Revolution there were some very picturesque characters. Will you permit me to refer to a few who have interested me particularly during the preparation of this address?

First, three loyalists who could not view with composure the severing of the ties which bound the colonies to the mother country: James Lloyd, the teacher of many of the younger men, himself the favorite pupil of Joseph Warner, William Smellie, and William Hunter, and a friend of John Hunter, could not see his way clear to cast in his lot with the revolutionists. But so profound was the impression of his integrity and so deep was the affection which he inspired, that his house was the first one which General Israel Putnam visited when he came with the troops from Cambridge to occupy Boston at its evacuation; and here he lived with the Doctor and his family for a short period.

John Jeffries, also a great teacher, absorbingly attached to scientific studies and pursuing them under appalling difficulties, was a loyalist who, on the evacuation of Boston, decided to remove with his family to Halifax and afterwards to England. He lived in England for awhile, engaging there in remunerative practice and undertaking researches of a high order, in regard to barometric pressure. At the close of the revolution he returned to Boston, and was soon busy with his old patients and with the new ones who were attracted by his charming personality.

Another loyalist, and like the last two, a friend of Dr. Holyoke, the loyalist in Salem, was Dr. Marshall Spring of Watertown. According to all accounts his neighbors were frequently exasperated by his provoking way of stating things, and they would have

compelled him to leave if it had not been for exigencies in their families which demanded his presence in Watertown. Notwithstanding his leanings towards the British, he was early on hand at Concord with his militant neighbors and was active throughout the terrible day, practically as a colonial surgeon. After the war he was chosen to important offices in the new state, and like all the progressive men of that time, lent a hand towards the formation of our honored Massachusetts Medical Society.

Second, the colonial surgeons who sympathized thoroughly with the revolutionists: Prominent among these were Simon Tufts, Jr., of Medford, who has been already alluded to in this address as having in charge one of the more desperate cases on April 19th; Joseph Fiske, John Warren, and William Eustis, of Boston. Dr. Fiske was twenty-three years of age at the time of this battle, and Eustis was one year younger. Their biographical sketches, even in outline, would occupy the full limits of another hour, and we must pass them by as representatives of a very large number who made constant sacrifices during the years of peril. Time is lacking also for more than a reference to their contemporaries who have given us precious records of the stirring events of the time. Among these the most prolific writer was a surgeon's mate, who began his work in June, 1775, and saw things through to the end. The *Military Journals* of James Thacher possess a degree of charm which attaches always to truth told in a naïve way and with modesty.

And, lastly, what shall I say of those who, first of all surgeons, like William Aspinwall, John Brooks, and Joseph Warren, were chosen to command or who chose to volunteer in the army? There is also a long list of well-equipped medical men who turned sooner or later from their profession to the weighty matters of judicial and legislative action at this critical period, and who aided the founders of our government in their difficult task. In short, it is plain that at that moment, just as in all critical epochs in the history of our race, there came forth men full-armed for any service, and that among the foremost of these stood the men of our profession.

Among all of these surgeons, loyalist and colonial, there was only

one who was accused of treason. On this spot, where he was brought for his second trial, we may appropriately recall the case.

In the Provincial Congress at Watertown, on October 27, 1775, this trial, one of the most tragical incidents of the whole revolution, took place. Dr. Benjamin Church, a trusted member of the Committee of Safety, who had participated in the most secret counsels of the colonists, and who by his devotion to the cause had been placed in charge of one of the most important departments of the revolutionary army, was detected in carrying on clandestine correspondence with the enemy. An intercepted letter in cipher was acknowledged by him to have been in his own handwriting. He was first tried before a military court, and after conviction was confined in the prison at Cambridge. On the twenty-seventh of October, 1775, he was taken to the Provincial Congress at Watertown, of which he was a member, and was "subjected to a rigid examination." The incriminating letter and his spirited defence of his course are both easily accessible in our larger libraries. Perusal of the letter and of the defence may lead to a reasonable doubt as to the guilt of the accused; but the doubts which may have existed then in the minds of some of the members who acted on his case were swept away by other circumstantial evidence and the officer was convicted. After a further term of confinement in a military prison he was permitted to sail for the West Indies, and on the voyage his vessel was lost.

This officer who was tried at Watertown was the first Surgeon General of the revolutionary army.

With this single exception (and even concerning this there may be a doubt) the surgeons of the colonial forces presented from first to last a noble example of patriotism and devotion. Our profession may well take pride in its contributions to the self-sacrificing service of the early and later days of our war for independence.

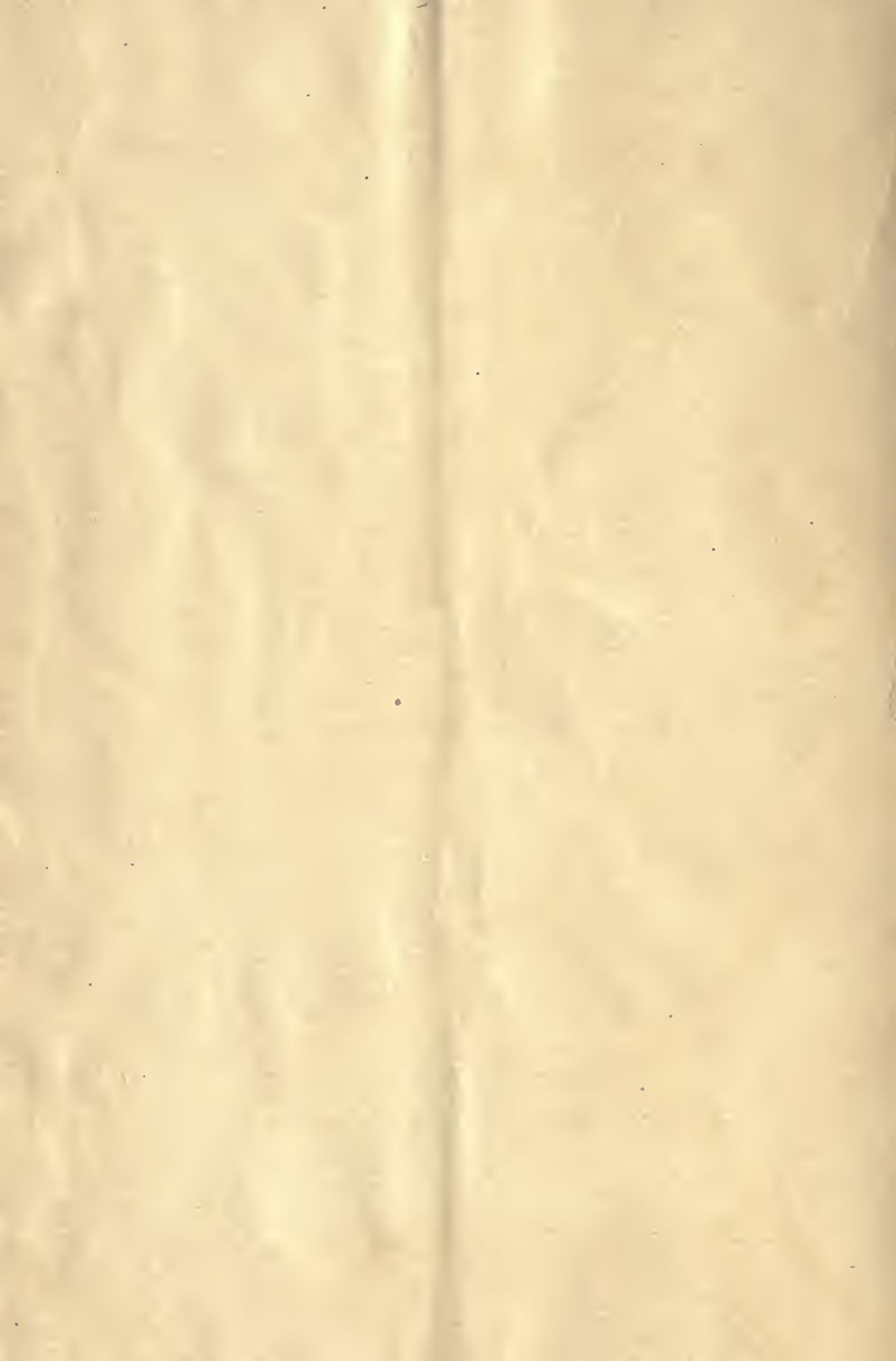
A century ago there came before the Middlesex Medical Society, which may be considered the progenitor of our own organization, Dr. Benjamin Waterhouse, a Professor of the Theory and Practice of Physic, who also gave instruction in his College in Natural History. His service in the latter office entitles me to claim him as a remote

predecessor, and I was therefore intensely interested in the perusal of his address. It was at the time when inoculation for small-pox was giving way to vaccination for the kine-pox, and prejudices were beginning to be aroused against the second innovation. Day before yesterday, I had the privilege of reading on the fly-leaf of the family Bible of Dr. Benjamin Waterhouse the record which showed that his first two children were inoculated for the small pox, but the more fortunate later comers were merely vaccinated. To be told by the granddaughter that the vaccine quills came from the home of Jenner, was to have repeated what you all have read in medical history; but to have the momentary glance at this record of the last century explained by the granddaughter of Waterhouse made the old times seem very real.

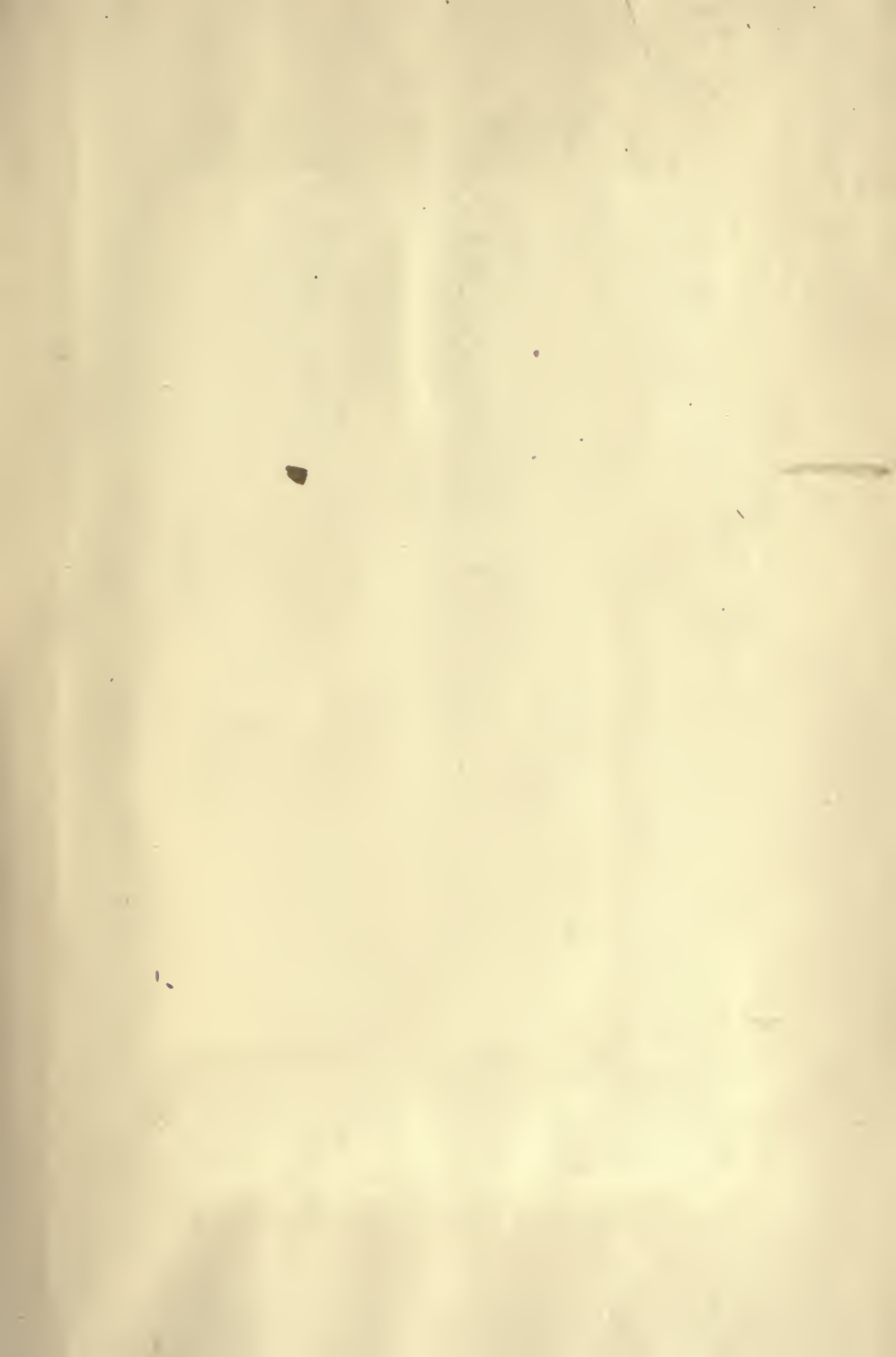
And now, standing as we do at the threshold of a new century with its hidden treasures, we may ask whether it is not a singular coincidence that both the eighteenth and the nineteenth centuries approached their close with the dominant idea of inoculation. With instrumental appliances characterized by the utmost precision, with an observational pathology satisfied with nothing but facts and impatient of theory, with occasional successes giving promise of greater success, students of the new inoculations begin their new century with everything in their favor.

In his address Dr. Waterhouse wisely refrains from making predictions, and we may safely follow his judicious example. But we may venture to say that the future is bright with promise. Our retrospective glance shows that much of the darkness of the past has fled, as shadows always fade before the dawn. Our look forward gives even greater hope.

But the chief lesson we are to learn from the retrospective glance is heightened admiration for the sterling virtues of the men of our profession, who in the very darkest days of the long revolution, when there was hardly even a glimmer of light for a guide, kept up good heart, did their daily work well, and never faltered in the love they bore their native country. As God was with the fathers, so may He be with the children!







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